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ST. THOMAS

RURAL DISTRICT COUNCIL.

REPORT

OF

MEDICAL OFFICER

OF

HEALTH

1945

EXETER:
Printed by H. Punchard & Son, St. Thomas,
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RURAL DISTRICT COUNCIL.

ANNUAL REPORT
FOR
1945

Mr. Chairman and Members of the

St. Thomas Rural District Council.

In their annual circular to Medical Officers of Health, the Ministry of Health have stressed the importance of giving various details of the Water Supplies in the district.

This was previously dealt with parish by parish in my Annual Report for 1944, to which was appended a most valuable summary compiled by the Sanitary Surveyor. I have therefore confined my attention in this Report to those supplies that have been either bacteriologically or chemically examined during the past year.

WATER SUPPLIES.

STARCROSS.

This supply from springs is an upland surface water and is apt to be totally unsuitable for consumption owing to its plumbo solvency. In June, 1945, a family living in Starcross was reported to be suffering from lead poisoning, and a sample of drinking water drawn from the house was immediately sent for examination. The County Bacteriologist reported that the water was very actively plumbo solvent.

The following report (with its recommendations) was read at the next meeting of the Health Committee :

Laboratory experiments show that this water has a high degree of plumbo solvency. The result is that when water remains for any length of time in contact with lead, such as in service pipes, in dwellings, a considerable amount of lead is dissolved. The amount depending in great measure upon the length of time the water remains in such contact.

Because of the risk of lead poisoning to consumers, certain precautions should be taken :

(a) Treatment at the source by lime and alum.

(b) No lead pipes should in future be allowed in a dwelling supplied with this water.

and (c) The consumers should be advised to allow the water to run to waste, especially in the morning, before any be used for cooking or drinking.

It was decided, however, to have further analysis made, and these were undertaken by Dr. Tickle, who sent in the following report :

Starcross Water Supply.

" I enclose the results of the examination of samples taken at certain houses to ascertain whether the water is contaminated with lead.

The results of the examination speak for themselves. Drinking water ought not to contain more than 0.015 part of lead per hundred thousand. If it contains more than 0.05 there is a danger of ill effects on health.

" When it contains as much as 0.30 the danger of ill effects is grave. Two of the samples contain no lead, but are contaminated with zinc from a galvanised iron pipe. Water that is drawn through galvanised iron pipe always contains such a trace of zinc, but such a trace of zinc is regarded as harmless to health.

" THOMAS TICKLE, Public Analyst."

RESULT OF ANALYTICAL EXAMINATION.

Article : WATER FROM STARCROSS PUBLIC SUPPLY.
Subject of Examination : Metallic contamination.
Label or Distinguishing Mark : " No. 1. Taken from tap at Luscombe's, near School. 21.6.45. 7.45 a.m."
Quantity Received :
Date when Received : 21st June, 1945.
The sample contained :

Lead	**nil**
Zinc	**1.5 parts per 100,000.**

Article: WATER FROM STARCROSS PUBLIC SUPPLY.
Subject of Examination : Metallic contamination.
Label or Distinguishing Mark: "No. 2. Taken from tap at Skinner's, 5 Marboro Terrace. 21.6.45. 7.50 a.m."
Quantity received:
Date when Received : 21st June, 1945.
The sample contained :

Lead nil
Zinc 1.0 part per 100,000.

Article: WATER FROM STARCROSS PUBLIC SUPPLY.
Subject of Examination : Metallic contamination.
Label or Distinguishing Mark: "No. 3. Taken from Public Drinking Fountain. 21.6.45. 8 a.m."
Quantity Received:
Date when Received : 21st June, 1945.
The sample contained :

Lead 0.06 part per 100,000.

Article: WATER FROM STARCROSS PUBLIC SUPPLY.
Subject of Examination : Metallic contamination.
Label or Distinguishing Mark: "No. 4. Taken from tap at Benhay Gardens. 21.6.45. 8.5 a.m."
Quantity Received:
Date when Received : 21st June, 1945.
The sample contained :

Lead 0.3 part per 100,000.

Article: WATER FROM STARCROSS PUBLIC SUPPLY.
Subject of Examination : Metallic contamination.
Label or Distinguishing Mark : "No. 5. Taken from tap at Palfrey's, 1 Church Street. 21.6.45. 8.15 a.m."
Quantity Received:
Date when Received : 21st June, 1945.
The sample contained :

Lead 0.05 per 100,000.

It will be seen from Dr. Tickle's report that an unhappy state state of affairs exists that may lead to serious consequences.

Dr. Oscar Faber, Consulting Engineer, was asked to prepare a scheme for treating the water at source, but unfortunately nothing has yet been done, and no precautions have been taken. This state of affairs is a serious matter for consumers in Starcross, for lead poisoning is a slow but insidious condition, its worst characteristic being its cumulative action. To prevent any repetition of lead poisoning first priority should be given to treating this water.

The latest routine bacteriological and chemical reports dated 1.10.45 are given below :

REPORT ON EXAMINATION OF SAMPLE OF WATER.

Sanitary District : St. Thomas Rural.
Source of Sample : Starcross. Springs. Before chlorination. A.
Date and time of sampling : 27.9.45.

CHEMICAL (results expressed as parts per 100,000).

Hardness, as calcium carbonate	
Temporary 1.6 ; Permanent 4.0 ; Total	5.6
Chlorides, as Chlorine	2.9
Ammonia free, and saline, as nitrogen	nil
Ammonia, albuminoid, as nitrogen ...	0.009
Nitrates, as nitrogen	0.66
Nitrites, as nitrogen	nil
Oxygen (absorbed 3 hrs. at 37°C) ...	0.012

Metals, Zinc, copper and lead—not detected.
pH value 6.0.
Remarks: Sample Clear and free from sediment.

BACTERIOLOGICAL.

Probable number coli-aerogene organisms per 100 c.c. = 50
B. coli of faecal type not detected.

CONCLUSIONS.

The sample is unsatisfactory bacteriologically.

REPORT ON EXAMINATION OF SAMPLE OF WATER.

Sanitary District : St. Thomas Rural.
Source of Sample : Starcross. Springs. After chlorination.
Date and Time of Sampling : 26.9.45.

CHEMICAL (Results expressed as parts per 100,000).

Hardness, as calcium carbonate	
Temporary 1.0 ; Permanent 3.8 ; Total	4.8
Chlorides, as Chlorine	2.9
Ammonia, free and saline, as nitrogen	nil

Ammonia, albuminoid, as nitrogen ...	0.01
Nitrates, nitrogen	0.8
Nitrites, as nitrogen	nil
Oxygen (absorbed 3 hrs. at 37°C.) ...	0.03

Metals, zinc, copper and lead—not detected.
pH value 6.0.
Remarks : Sample clear and free from sediment.

BACTERIOLOGICAL.

Probable number coli-aerogenes per 100 c.c. = 20
B. coli of faecal type not detected.

CONCLUSIONS.

The sample is unsatisfactory bacteriologically.

BRIDFORD.

The latest bacteriological report dated 5.10.45 shows that before and after treatment this water was unsatisfactory, but was remedied by increased chlorination.

Sanitary District : St. Thomas Rural District.
Source of Sample : Bridford. Spring. After chlorination.
Date and Time of Sampling : 4.9.45.

CHEMICAL (results expressed as parts per 100,000).

Hardness, as calcium carbonate	
Temporary 1.6 ; Permanent 4.4 ; Total	6.0
Chlorides, as Chlorine	1.9
Ammonia, free and saline, as nitrogen	nil
Ammonia, albuminoid, as nitrogen ...	.059
Nitrates, as nitrogen	.36
Nitrites, as nitrogen	nil
Oxygen (absorbed 3 hrs. at 37°C) ...	.139

Metals, zinc, copper and lead—not detected.
pH value 6.2.

Remarks—The sample had a brownish and yellow colour, slightly paler than that of the sample taken before chlorination, and was free from sediment. No iron was detected.

BACTERIOLOGICAL.

Probable number coli-aerogenes organisms per 100 c.c. = 25
B. coli of faecal type present in 10 ml.

CONCLUSIONS.

These results indicate that the present treatment is not effective.

EAST BUDLEIGH AND OTTERTON.

The water supply to these parishes was repeatedly found to be unsatisfactory both before and after treatment. Partly on this account and partly because of shortage of supply they are now supplied in bulk from Exmouth (Dotton).

The latest reports are dated 11.1.45 and 7.9.45 respectively.

W.41. E. Budleigh. Public Supply. Springs.

Probable number coli-aerogenes organisms per 100 ml. = 350

This sample is unsatisfactory bacteriologically.

REPORT ON EXAMINATION OF SAMPLE OF WATER.

Sanitary District : St. Thomas Rural.
Source of Sample : Otterton. Springs.A. After chlorination.
Date and Time of Sampling : 3.9.45.

CHEMICAL (results expressed as parts per 100,000).

Hardness as Calcium carbonate
Temporary 7.2; Permanent 8.0; Total 15.2
Chlorides, as Chlorine 2.6
Ammonia, free and saline, as nitrogen nil
Ammonia, albuminoid, as nitrogen ... .007
Nitrates, as nitrogen 4
Nitrites as nitrogen ... ... nil
Oxygen (absorbed 3 hrs. at 37°C) ... .004
Metals, zinc, copper and lead—not detected.
pH value 7.4.
Remarks—Sample clear and free from sediment.

BACTERIOLOGICAL.

Probable number coli-aerogenes organisms per 100 c.c. = 170
B. coli of faecal type present in 1 ml.

CONCLUSIONS.

This sample is unsatisfactory bacteriologically.

BROADCLYST, HARPFORD, LYMPSTONE, TOPSHAM AND WOODBURY.

The samples taken from these supplies, which in each case comes from a deep borehole, proved satisfactory both before and after chlorination.

The analyses (with dates) are given below :

REPORT ON EXAMINATION OF SAMPLE OF WATER.

Sanitary District : St. Thomas Rural.
Source of Sample : Broadclyst Borehole.
Date and Time of Sampling : 4.9.45.

CHEMICAL (results expressed as parts per 100,000).

Hardness, as calcium carbonate
Temporary 21.4; Permanent 16.6; Total 38.0
Chlorides, as Chlorine 3.8
Ammonia, free and saline, as nitrogen nil
Ammonia, albuminoid, as nitrogen ... .004
Nitrates, as nitrogen 1.2
Nitrites, as nitrogen ... ... nil
Oxygen (absorbed 3 hrs. at 37°C) ... .004
Metals, zinc, copper and lead—not detected.
pH value 7.4.
Remarks—Sample clear and free from sediment.

BACTERIOLOGICAL.

Probable number coli-aerogenes organisms per 100 c.c. = nil.

CONCLUSIONS.

The sample is of a satisfactory standard of bacterial and organic purity.

W.40 Woodbury. Admiralty Supply. Globe Hill. Bore.
Probable number coli-aerogenes organisms per 100 ml. = nil.
This sample is satisfactory bacteriologically.

REPORT ON EXAMINATION OF SAMPLE OF WATER.

Sanitary District : St. Thomas Rural.
Source of Sample : Harpford. Borehole.
Date and Time of Sampling : 4.9.45.

CHEMICAL (Results expressed as parts per 100,000).

Hardness, as calcium carbonate
Temporary 8.8 ; Permanent 5.2 ; Total 14.0
Chlorides, as Chlorine 2.3
Ammonia, free and saline, as nitrogen nil
Ammonia, albuminoid, as nitrogen ... .0084
Nitrates as Nitrogen ... ... .32
Nitrites, as nitrogen ... ... nil
Oxygen (absorbed 3 hrs. at 37°C) ... .004
Metals, zinc, copper and lead—not detected.
pH value 6.6.
Remarks—Sample clear and free from sediment.

BACTERIOLOGICAL.

Probable number coli-aerogenes organisms per 100 c.c. = 2
B.coli of faecal type not detected.

CONCLUSIONS.

This sample is of a satisfactory standard of organic and bacterial purity.

Sanitary District : St. Thomas Rural.
Source of Sample : Lympstone.
Date and Time of Sampling : 25.9.45.

CHEMICAL (Results expressed as parts per 100,000).

Hardness, as calcium carbonate
Temporary 16.0; Permanent 8.0; Total 24.0
Chlorides, as Chlorine 3.7
Ammonia, free and saline, as nitrogen nil
Ammonia, albuminoid, as nitrogen ... 0.004
Nitrates, as nitrogen 0.4
Nitrites, as nitrogen ... ... nil
Oxygen (absorbed 3 hrs. at 37°C) ... 0.015
Metals, zinc, copper and lead—not detected.
pH value 7.0.
Remarks : Sample clear and free from sediment.

BACTERIOLOGICAL.

Probable number coli-aerogenes organisms per 100 c.c. = nil.

CONCLUSIONS.

This sample is of a satisfactory standard of bacterial and organic purity.

REPORT ON EXAMINATION OF SAMPLE OF WATER.

Sanitary District : St. Thomas Rural.
Source of Sample : Clystlands, Topsham, Borehole.
Date and Time of Sampling : 7.9.45.

CHEMICAL (Results expressed as parts per 100,000).

Hardness, as calcium carbonate
Temporary 5.0; Permanent 18.0; Total 23.0
Chlorides, as Chlorine 4.6
Ammonia, free and saline, as nitrogen nil
Ammonia, albuninoid, as nitrogen ... 0.0086
Nitrates, as nitrogen 1.2

Nitrites, as Nitrogen ... ... nil
Oxygen (absorbed 3 hrs. at 37°C) ... .019
Metals, zinc, copper and lead—absent.
pH value 6.8.
Remarks—Sample clear and free from sediment.

BACTERIOLOGICAL.

Probable number coli-aerogenes organisms per 100 c.c. = nil.

CONCLUSIONS.

This sample is of a satisfactory standard of organic and bacterial purity.

REPORT ON EXAMINATION OF SAMPLE OF WATER.

Sanitary District : St. Thomas Rural.

Source of Sample : Rushmore, Topsham. After chlorination. Bore hole.

Date and Time of Sampling : 7.9.45.

CHEMICAL (results expressed as parts per 100,000).
Hardness, as calcium carbonate
Temporary 15.0; Permanent 19.0; Total 34.0
Chlorides, as Chlorine 3.4
Ammonia, free and saline, as nitrogen 0.02
Ammonia, albuminoid, as nitrogen ... 0.0068
Nitrates, as nitrogen 0.8
Nitrites, as nitrogen ... ... nil
Oxygen (absorbed 3 hrs. at 37°C) ... 0.015
Metals, zinc, copper and lead—absent.
pH value 7.4.
Remarks—Sample clear and free from sediment.

BACTERIOLOGICAL.

Probable number coli-aerogenes organisms per 100 c.c.—nil.

CONCLUSIONS.

This sample is of a satisfactory standard of organic and bacterial purity.

GENERAL HEALTH.

This has remained good and no epidemic of any proportion has been reported.

INFECTIOUS DISEASE.

A list of notifications of the various Infectious Diseases is given below :

Measles	83
Whooping Cough	65
Scarlet Fever	21
Dysentery	20
Erysipelas	5
Tuberculosis	32
Pneumonia	22
Cerebro Spinal Meningitis	3
Diphtheria	3
Ophthalmia Neonatorum	1
Infective Hepatitis	1
Total	256

The incidence of **Measles** has shown a marked decrease as was to be expected.

83 cases were notified as against 377 for 1944. The disease has not been of virulent type and no deaths from this infection have occurred.

The small epidemic of Whooping Cough shows about the same number of cases as last year, 65 against 77 for 1944. It may well be, however, that many mild cases did not seek the help of a doctor and that the number of cases occurred is much greater than the 65 notified to me.

The number of cases of **Tuberculosis** is still steadily mounting and is due for the most part to cases diagnosed in the services and notified to the M.O.H. on their discharge.

Scarlet Fever still continues to be of such a mild type that it is now treated as one of the minor infectious diseases and, except for special cases, patients are nursed in their own homes instead of being removed to Isolation Hospital.

The cases of **Dysentery** show a satisfactory decline in numbers. The greatest proportion of them occurred in a Mental Institution and were all of the Sonne type.

SOCIAL SERVICES.

The following social services are all conducted by the County Medical Officer acting through specially appointed experts:

Medical Inspection of School Children.
Maternity and Child Welfare.
Tuberculosis.
Venereal Disease.

The medical inspection of School Children is carried out by Assistant County Medical Officers, and Health Visitors, and School Nurses make constant visits to schools to ensure that a satisfactory standard of personal cleanliness is maintained.

Tuberculosis and Venereal Clinics are held in Exeter.

In addition to the Maternity and Child Welfare Centre at Topsham and Alphington, a third clinic has been opened at Whimple; each clinic is held twice monthly and each is well patronised.

NUMBER OF CHILDEN BORN IN THE DISTRICT.

April 1st, 1945, to March 31st, 1946.

Girls	**Boys**
123	135

Total 258.

DIPHTHERIA IMMUNISATION.

As in previous years, this has been carried out continuously by Private Medical Practitioners. In addition to the two centres at Alphington and Topsham, another centre has been opened at Whimple, where Immunisation is conducted each month by the Assistant County Medical Officer.

Number of Children Immunised.

1st January, 1945, to 31st December, 1945.

Under 5 years	**Over 5 and under 15 years**
298	**41**

Total 339

During the Autumn of 1945 each parish was visited and all children immunised 4 years earlier were given a reinforcing dose of Toxoid. The Health Visitors and School Nurses did useful work in rounding up many children and babies who had not been immunized previously, and these, too, were immunized during this " drive."

The number of children receiving this reinforcing dose was **1288.**

SANITARY INSPECTION.

The following summary shows the work done during the year:

DRAINAGE.

	No.
No. of Private House Drains connected with Sewers	10
No. of Drains repaired	46
No. of New Drains	28
No. of Slop Drains	4
No. of New Sewers	3

FOOD.

No. of Seizures or Surrenders of Unsound Meat, Fish, &c.	104

HOUSES.

No. of New Houses erected	3
No. of Old Houses satisfactorily renovated	94
No. of Houses repaired and limewashed	126
No. of premises inspected under the Public Health Act and Housing Act	826

DISINFECTIONS.

No. of Lots of Bedding and Clothing disinfected. (On recommendation of M.O.H. disinfections generally discontinued 1944)	7
No. of Houses disinfected	4
No. of Schools disinfected	2

OFFENSIVE TRADES.

No. of Offensive trades	1
No. of Offensive trades improperly conducted	0

CLOSETS.

	No.
No. of Privies converted into Earth Closets	1
No. of conversions into Water Closets	1
No. of cases insufficient Closet Accommodation	3
No. of cases remedied	3

RAILWAY STATIONS.

No. of visits	28

SCAVENGING.

No. of Refuse Heaps discovered injurious to Health	3
No. of Refuse Heaps remedied	4

BAKEHOUSES.

No. of Bakehouses	45
No. of visits to Bakehouses	59
No. found defective	1

DAIRIES AND COWSHEDS.

No. of Dairies and Cowsheds	702
No. of visits to Dairies and Cowsheds	691
No. of improvements to Dairies and Cowsheds	52

SLAUGHTER HOUSES.

No. of Slaughter Houses. (Some now used as Meat Stores)	32
No. of visits to Slaughter Houses	104
No. found unsatisfactory	0
No. improved	0
No. of Diseased Carcases found partly or wholly unfit for human consumption	3

WATER SAMPLES.

No. of samples of water taken for analysis	134
No. found doubtful	63
No. of Old Wells cleaned out and repaired	19
No. of New Houses certified for occupation with adequate water supply	0
No. of New Wells sunk	14
No. of villages with Public Supply	18
No. of villages without water mains	30
No. of complaints as to water supply	13

MILK SAMPLES.

	No.
No. of samples taken	162
No. of samples passed	109
No. of samples failed	53
No. of Designated producers	162

NUISANCES.

No. of complaints	8
No. of notices issued for abatement of Nuisances	71
No. of Nuisances abated	68
No. of complaints of Pigsties	3
No. of Animals removed	2

THOS. BROWN, M.D., D.P.H.,

Medical Officer of Health.

July, 1946.